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10/593,603

10/26/2006

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EXAMINER

KENNEDY, JOSHUA T

ART UNIT

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3679

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |  |  |
|------------------------------|--------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/593,603 | <b>Applicant(s)</b><br>BAUKNECHT, GERT |  |
|                              | <b>Examiner</b><br>JOSHUA T. KENNEDY | <b>Art Unit</b><br>3679                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 5-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 June 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Claims 1-4 have been cancelled.

Claims 5-17 have been examined.

### ***Drawings***

The drawings were received on 6/19/2008. These drawings are acceptable.

### ***Claim Objections***

Claim 16 is objected to because of the following informalities: Claim 16 is a duplicate of Claim 15 and should be deleted. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 5, 6, 9, 10, 13 and 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Dover et al (US Patent 5,937,985).

As to Claim 5, Dover et al disclose a disk carrier (Fig 1) with a complementary profile (20) supporting and facilitating rotating of a disk packet (26) with the disk carrier, the disk packet being axially affixed by a snap ring (32) inserted in a groove (30) formed in the disk carrier adjacent the complementary profile, the groove (30) being located on a

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radially inwardly facing circumferential surface of the disk carrier and having an internal circumferential surface (Fig 1) and two opposed groove sides (Fig 1), the snap ring (32) having two opposed flat faces (70,72), a first groove side of the groove (30) which abuts against the snap ring having an undercut with a first angle of inclination (Examiner considers the angle of inclination to be zero), the first groove side being parallel to a second groove side (Fig 1), the groove providing a slanted surface at the first angle of inclination (Again, Examiner notes that the angle is zero degrees) with reference to a radial plane, the two opposed flat surfaces (70,72) of the snap ring being conically inclined with respect to one another at a second angle of inclination (Fig 3), the second angle of inclination being greater than the first angle of inclination (Fig 1) and a maximum width of the snap ring is located adjacent the internal circumferential surface of the groove (Fig 1).

It is noted that the specific method of forming is not germane to the issue of patentability of the device itself. Therefore, the limitation "the groove being made by stamping" has been given only limited patentable weight and does not serve to structurally distinguish the claims. See MPEP § 2113.

As to Claim 6, Dover et al disclose a disk carrier wherein the disk carrier outer disk carrier and the complementary profile is an inner profile (Fig 1).

As to Claim 9, Dover et al disclose a disk carrier (Fig 1) having a complementary profile (20) receiving a disk packet (26) which is affixed by a snap ring (32), the complementary

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profile facilitating rotation of the disk packet along with the disk carrier as the disk carrier rotates, the snap ring being inserted in a groove (30) located on a circumferential surface of the disk carrier (Fig 1) comprising a base surface (with first and second opposed side surfaces (Fig 1), and the snap ring having two opposed flat inwardly tapering surfaces (70,72), a first side surface of the groove (30), which abuts against an inwardly tapering face of the snap ring (Fig 1 shows the outermost edge of the tapering face to abut with the first side surface of the groove), having an undercut with a first angle of inclination (Examiner considers the angle of inclination to be zero), the first side surface being parallel to a second side surface (of the groove (Fig 1), the providing a slanted surface at the first angle of inclination (Again, Examiner notes that the angle is zero degrees) with reference to a radial plane, the two opposed inwardly tapering surfaces of the snap ring being conically inclined with respect to one another at a second angle of inclination (Fig 3), and the second angle of inclination being greater than the first angle of inclination (Fig 1) with a maximum width of the snap ring being located adjacent the base surface of the groove (Fig 1).

It is noted that the specific method of forming is not germane to the issue of patentability of the device itself. Therefore, the limitation "the groove being made by stamping" has been given only limited patentable weight and does not serve to structurally distinguish the claims. See MPEP § 2113.

As to Claim 10, Dover et al disclose a disk carrier wherein the disk carrier outer disk carrier and the complementary profile is an inner profile (Fig 1).

As to Claim 13., Dover et al disclose a disk carrier (Fig 1) comprising:

a radially inner profile (20) that engages a radially outer profile (20) of a disk set (26) such that the disk set is axially slidable along and rotationally supported by the disk carrier;

a groove (30) extending radially into the radially inner profile of the disk carrier (Fig 1) and having an inner side, a first side and a second side which is parallel to the first side, the first side and the second side slope at a first angle (Examiner considers the angle to be zero) with respect to a radial plane which is normal to an axis of rotation;

a snap ring (32) having a radially outer face (78), a radially inner face (80), a first planar face (70) and a second planar face (72), the first planar face and the second planar face slope towards each other from the radially outer face to the radially inner face (Fig 3), an axial width of the radially outer face is a maximum axial width of the snap ring (Fig 3), each of the first planar face and the second planar face are sloped at a second angle with respect to the radial plane (Fig 3), the snap ring being located within the groove such that the radially outer face of the snap ring abuts with the inner side of the groove (Fig 1) and the first planar face of the snap ring abuts with the first side of the groove (Fig 1); and

the second angle is greater than the first angle (Fig 1).

It is noted that the specific method of forming is not germane to the issue of patentability of the device itself. Therefore, the limitation "the groove being made by stamping" has been given only limited patentable weight and does not serve to structurally distinguish the claims. See MPEP § 2113.

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As to Claims 15 and 16, Dover et al disclose a disk carrier wherein the groove (30) is formed on an inwardly facing circumferential surface of the disk carrier directly adjacent the complementary profile (Fig 1).

As to Claim 17, Dover et al disclose a disk carrier wherein the groove (30) is formed directly adjacent the complementary profile (Fig 1).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dover et al.

Dover et al disclose the disk carrier significantly as claimed but do not disclose it as an inner disk carrier and the complementary profile being an outer profile. It would have been obvious to a person of ordinary skill in the art to modify the snap ring assembly as a person with ordinary skill has good reason to pursue the known options within his or her technical grasp. In turn, because the instant invention as claimed has the properties predicted by the prior art, it would have been obvious to include the groove and snap ring on an inner disk carrier and wherein the complementary profile is an outer profile in order to gain the commonly understood benefits and applications of

such an adaptation and/or modification having results that would be expected and predictable to one of ordinary skill in the art.

Claims 8, 12 and 114 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dover et al in view of Hayman (US Patent 5,005,877).

Dover et al disclose the disk carrier significantly as claimed, but don't disclose the first angle of inclination being about 2°.

Hayman discloses a similar retaining ring (82) being held in an inclined circumferential groove (78) having first and second sides being parallel to each other (Fig 5) which allows for the insertion and release of the retaining ring to be easier since "the force applied to the locking bodies is aligned with the direction that the [ring] move[s]" (Col 6, Lines 47-53) and further the "angled channel 78 is also easier to machine in the inside surface...and allows the [profile] to be made as a single piece. This provides greater strength and reduces the cost" (Col 6, Lines 53-58). It would have been obvious to one of ordinary skill in the art to modify the groove of Loe et al to have inclined, parallel walls to allow for easier manufacture, while having a greater strength and a reduced cost.

Hayman does not disclose the first angle of inclination being about 2°. It is not inventive to state the optimum values of the first angle of inclination. Through routine experimentation and optimization in finding a desired strength of connection, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first angle of inclination of Dover et al in view of Hayman to have the be



about 2° because this is merely the application of the of the expected level of skill on the part of one of ordinary skill producing expected and predictable results.

### ***Conclusion***

Applicant's amendment, specifically the positive inclusion of the disk packet (Claim 5, Lines 2-3), necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSHUA T. KENNEDY whose telephone number is (571)272-8297. The examiner can normally be reached on M-F: 7am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joshua T. Kennedy/  
Examiner, Art Unit 3679  
8/18/2008

/Daniel P. Stodola/  
Supervisory Patent Examiner, Art Unit 3679